

## Selecting forages for a drying environment

### THE FARM

#### Allanby Pastoral Company

Rochester, Northern Victoria

Twelve years of diminishing irrigation water allocations has led Brendan Martin on an ongoing search for water-efficient forages.

Brendan manages Allanby Pastoral Company, a 450-hectare irrigated dairy farm near Rochester in Northern Victoria.

When the farm was established 10 years ago, permanent pasture was the predominant pasture species sown. These days, the cows graze a mixture of annual ryegrass/clover, lucerne and forage cereals.

The dairy farm was established on a fresh 350 hectare site in 1998, when 300 hectares was laser graded to border check irrigation. A further 100 hectare block was purchased and laser graded in 2002.

They milk 650 cows, with calving split equally between autumn and spring.

Two recycle dams enable all the runoff water to be caught and reused on farm.

### BUSINESS SNAPSHOT

- Number of cows: 650
- Year round milking; split seasonal calving
- Farm area: 450 ha
- Irrigation: Up to 90% of property
- Irrigation water source: Goulburn irrigation system, deep lead bore, sewage waste water
- Supplementary feeding: 3 tonne grain/cow/year
- Predominant pasture species: Ryegrass, clover, lucerne and forage cereals

Brendan Martin standing in annual ryegrass and clover paddock.



## CHANGES TO THE FARMING SYSTEM

### Irrigation

The main irrigation water source is from the Goulburn irrigation system. There is a 980 megalitre (ML) high-reliability water share supplied to the farm through an electromagnetic flow meter capable of delivering 18 ML/day. Additional allocation is also purchased in most years.

Over the past couple of years there has been access to around 300 ML of waste water from a nearby sewage treatment pond. The waste water is discharged at the main service point, and diluted 1:3 in the surface water. Its use is monitored closely by the EPA under an Environmental Impact Plan.

There is also a deep lead bore with a 488 ML entitlement, however, use of this is minimised as the water is quite saline at around 2200 EC.

### Feeding

Next to the rotary dairy is a 600-cow feed pad in which cows are fed a mixture of silage, hay and grain. Grain (predominantly wheat) is also fed in the dairy using an individual feeder system. This allows regulation of the amount of grain given to individual cows; cows are fed according to stage of lactation with fresh cows receiving more grain than stale cows. Cows are fed a total of 3 tonnes of grain per year.

Irrigated lucerne growing at Allanby.



A succession of dry years in Northern Victoria and the resulting decrease in water allocations has led a shift away from the traditional 'permanent pasture' (perennial ryegrass and clover mix) towards annual ryegrass/clover, forage cereals and lucerne.

### Forage selection

A variety of summer irrigation forages have been trialled over the past 10 years. Initially, 150 ha was sown to permanent pasture, however it was found that the perennial ryegrass struggled to survive over summer on the heavy clay soils.

Some of the newer varieties of tall fescue were then tried and, while these grew well, maintaining feed quality and palatability under grazing was found to be a problem.

Lucerne has been settled on as the summer forage of choice with the advantages of good summer growth rates, good feed quality and suitability for either grazing or conservation. An added advantage of lucerne in seasons of low-water allocation is its ability to survive without irrigation and still respond to any summer rainfall.

While the farm is well set up to handle bulk silage, the recent drop in milk price has made Brendan keen to optimise the amount of forage grazed by the herd. He has estimated that conserving silage and feeding it back to the milking herd costs

## LESSONS LEARNED

- **Poor survival of ryegrass over summer**
- **Lower water allocations lead shift towards annual crops and lucerne**
- **Emphasis on grazed pastures for low-cost production**

around \$120/tonne of dry matter, once losses in the silage pit (10%) and on the feed pad (7%) are taken into account.

With low milk prices and scarcity of water, only pastures that can be grazed by the milking herd will be irrigated. This means that the annual ryegrass and lucerne has been irrigated, while cereal crops have had to rely on natural winter rainfall.

### Information/resources needed to make the changes

Brendan seeks advice from a range of professional sources. He has regular discussions with an agronomist, a nutritionist and a farm business consultant. He is also involved in one of Murray Dairy's Dairy Business Network groups.

### What the future holds

Brendan feels that the ideal mix for the farm is about 1/3 annual ryegrass/clover, 1/3 cereals and 1/3 lucerne. The areas sown to annuals from year to year will vary with water allocations.

## CONTACT

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